

ATTY. DOCKET NO. 129843.1051
CUSTOMER NO. 32914

AMENDMENT
SERIAL NO. 10/090,060

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

Listing of Claims:

1. (Previously Presented) A building material comprising a cementitious binder and an aggregate, and cellulose reinforcing fibers, wherein at least a portion of the fibers are pretreated with a quaternaryamine dispersant to form chemically treated cellulose fibers with improved dispersibility, wherein the dispersant binds hydroxyl groups on the fiber surface prior to the fibers being incorporated into the building material so as to make the fiber surface more hydrophobic and to repel water and to substantially inhibit bonding between hydroxyl groups of different fibers, thereby substantially reducing inter-fiber hydrogen bonding so that the chemically treated cellulose fibers are more readily dispersed in the building material to form a fiber cement mixture.

2. (Previously Presented) The building material of Claim 1, wherein the dispersant binds hydroxyl groups on the fiber surface so as to substantially inhibit bonding between hydroxyl groups of the same fiber, thereby substantially reducing intra-fiber hydrogen bonding.

3. (Original) The building material of Claim 1, wherein the dispersant physically blocks the hydroxyl groups from bonding with the hydroxyl groups of different fibers.

4. (Previously Presented) The building material of Claim 1, wherein the dispersant comprises at least one functional group that chemically bonds to the hydroxyl groups on the fiber surface in a manner so as to substantially prevent the hydroxyl groups from bonding with hydroxyl groups of different fibers.

5. (Canceled)

6. (Previously Presented) The building material of Claim 1, wherein the dispersant further organic compounds selected from the group consisting of polyamine compounds, other cationic surfactants, anionic surfactants, non-ionic surfactants, alkylalkoxysilane, alkoxysilane, halide organosilane, and mixtures thereof.

7. (Original) The building material of Claim 1, wherein the dispersant comprises approximately 0.001%-20% of the oven dry weight of the fibers.

8. (Previously Presented) The building material of Claim 1, wherein the dispersant further comprises a debonder.

9.-38. (Canceled)

39. (Previously Presented) The building material of Claim 1, wherein the building material further comprises fibers selected from the group consisting of untreated cellulose fibers, fluff fibers, natural inorganic fibers, synthetic fibers.

40. (Previously Presented) The building material of Claim 1, wherein the cellulose reinforcing fibers are selected from the group consisting of wood and other lignocellulosic raw materials.

41. (Previously Presented) The building material of Claim 1, wherein the fibers are at least partially de-watered before being incorporated into the building material.

42. (Withdrawn) A method of preparing a building material comprising:

providing a cementitious binder and an aggregate and cellulose reinforcing fibers, wherein at least a portion of the fibers are pretreated with a quaternaryamine dispersant to form chemically treated cellulose fibers with improved dispersibility, wherein the dispersant binds hydroxyl groups on the fiber surface prior to the fibers being incorporated into the building material so as to make the fiber surface more hydrophobic and to repel water and to substantially inhibit bonding between hydroxyl groups of different fibers, thereby substantially reducing inter-fiber hydrogen bonding so that the chemically treated cellulose fibers are more readily dispersed in the building material to form a fiber cement mixture.